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10/608,012	06/30/2003	Ivan Roson	11016-0010	1946

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EXAMINER

SUKMAN, GABRIEL S

ART UNIT	PAPER NUMBER
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3641

DATE MAILED: 12/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/608,012

Applicant(s)

ROSON ET AL.

Examiner

Gabriel S. Sukman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 June 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 6/30/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Drawings*

The drawings are objected to because there is no description of Figure 1D in the specification while there is a description of a Figure 10, which is not present in the drawings. It is suspected that the figure in the drawings labeled "Fig. 1D" should be labeled as "Fig. 10".

Further, reference number "26" in figure 4 does not appear to refer to the same element that the number refers to in figures 5 and 6, namely, the silicone washer.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

The disclosure is objected to because of the following informalities: the disclosure on page 4, lines 16-19 of the specification refers to the identification of the "radial plan YOZ" of the engine structure and that the dynamic absorbers (15a and 15b) are configured in such a way as to be induced to "move in the radial plan YOZ of the power engine structure 5". Firstly, it is unclear what is meant by the radial "plan". It is suspected that the disclosure means to refer to the radial "plane" of the engine structure but such association is nevertheless unclear. Secondly, even if it were to be assumed that the disclosure intends to refer to the radial plane, it does not appear on the face of the specification or drawings that the dynamic absorbers (15a, 15b) are shown to be configured to "move in the radial plan[e] YOZ". As is understood from the disclosure and from the general knowledge in the art, dynamic absorbers of the type shown in the figures as 15a and 15b "move" in a longitudinal direction; that is, in terms of the coordinate system shown in figure 2, along a longitudinal axis that is parallel to the longitudinal axis, x'x, of the engine. As such, the dynamic absorbers would not appear to move in the radial plane YOZ (because they would effectively be moving in and out of that plane) but are instead moving along a longitudinal axis.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation, "wherein the dynamic absorbers are supported to move in said radial plan of said power engine structure" in lines 13-15. This limitation is indefinite since it is unclear whether this feature accurately defines the invention as described. See the discussion above with respect to this feature in the specification.

Claims 2-10 depend from claim 1 and are therefore rejected as well.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5 and 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,490,556 to Bennett, Jr. et al. (hereinafter referred to as Bennett) in view of U.S. Patent Application Publication No. US 2002/0008341 A1 to Yamada et al. (hereinafter referred to as Yamada).

Bennett clearly discloses all of the limitations of claim 1 except for the inclusion of a fluid mount isolator, as can be seen in figures 3 and 4 of Bennett. Further, Bennett discloses the tendency of vibration from jet engines to peak at two separate vibration

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frequencies and discloses that each pair of dynamic absorbers may attenuate a respective one of the vibration peaks (see col. 3, lines 8-51). Yamada teaches a hydraulic vibration isolator to isolate vibrations between a vibrating structure that is connected to a resonating structure. Such a device is particularly useful in engine mount situations to prevent harmful and uncomfortable effects on a cabin structure of a vehicle that is connected to a vibrating engine structure. It would have been obvious to one having ordinary skill in the art at the time the invention was made to install the hydraulic vibration isolator of Yamada between the linkages of Bennett that attach the yoke to the engine structure in order to further reduce vibration emanating from the engine structure and to make the experience more comfortable for passengers aboard the aircraft.

The limitations of claim 2 are taught by the modified invention of Bennett in view of Yamada since the dynamic absorbers of Bennett are tuned by adjusting the compression and the fluid isolator of Yamada is tuned by adjusting its stiffness. It would have been obvious to assign the most appropriate vibration damper for each major tone felt by the structure as a matter of routine skill.

The limitations of claims 3 and 4 are taught by the modified invention of Bennett as well since the hydraulic vibration isolators would necessary be located between the dynamic absorbers (since that is where the engine connection of Bennett is located) and the mount includes transversal shafts, 40, to mount the dynamic absorbers.

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The limitations of claim 5 are taught by the modified invention of Bennett in view of Yamada since the absorbers consist of metallic alloy (steel) and a resilient material (see col. 3, line 66 through col. 4, line 12).

The limitations of claim 7 are taught by the modified invention of Bennett in view of Yamada since it would have been obvious to use a commonly known and used material such as a carbon-tungsten steel as a matter of design choice and routine skill since no particular criticality has been disclosed as being associated with any material.

The limitations of claims 8-10 are taught by the modified invention of Bennett in view of Yamada since Bennett discloses a washer (62) and clearly discloses the limitations of the claims in figure 5.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bennett in view of Yamada as applied to claims 1 and 5 above, and further in view of U.S. Patent No. 4,697,781 to Hamano et al. (hereinafter referred to as Hamano).

The modified invention of Bennett in view of Yamada discloses all of the limitations of claim 6 except for specifying that the resilient material is rubber or an elastomeric material. Hamano, however, discloses a similar dynamic absorber in which rubber is utilized as the resilient material. It would have been obvious to one having ordinary skill in the art to use the dynamic absorber of Hamano on the structure of Bennett in order to take advantage of the disclosed benefits of the Hamano damper such as deterioration prevention and increased life of the damper.

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***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 5,873,559 to von Flotow et al.

U.S. Patent No. 5,810,319 to von Flotow et al.

U.S. Patent No. 3,487,888 to Adams et al.

U.S. Patent No. 5,762,295 to McGuire et al.

U.S. Patent No. 5,947,457 to Swanson et al.

U.S. Patent No. 5,687,948 to Whiteford et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gabriel S. Sukman whose telephone number is (703) 308-8508. The examiner can normally be reached on M-F, 8:30-6:00, every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael J. Carone can be reached on (703) 306-4198. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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MICHAEL J. CASADE  
SUPERVISORY PATENT EXAMINER